

REMARKS

Claims 1-23 were pending in the present application. By virtue of this response, claim 11 has been canceled, claims 1-4, 8-10, 12-19 have been amended, and new claims 24-29 have been added. Accordingly, claims 1-10 and 12-29 are currently under consideration.

The specification has been amended in several places, primarily to correct typographical errors and to correct chemical nomenclature. Paragraphs [0006], [0010], [0012], [0022], and [0023] are all amended to remove ‘hydrogen’ from the group of substituents for R<sup>9</sup>. The specification clearly indicates that R<sup>9</sup> can be singly or multiply substituted on the ring with a member of the Markush group that includes hydrogen. Inclusion of hydrogen in the group R<sup>9</sup> definition would be a substitution of hydrogen for hydrogen, i.e. it would not be a substitution at all. Thus, the amendment is made to clarify the error, which would be evident to one skilled in the art. Paragraph [0023] is also amended to correct the numbering of the second structural formula in the paragraph. As there is another formula IV in paragraph [0016], the formula in paragraph [0023] was re-numbered as V. Paragraphs [0025] and [0026] are amended to provide chemical nomenclature that more clearly describes the given structures using a standard chemical name generator tool ChemdrawUltra<sup>TM</sup>. These nomenclature changes are supported by the structures given in the specific Examples 1-57 and are also reflected in the changes to the titles of these Examples. Further, paragraphs [0357], [0358], [0360], [0362], [0364], [0366], [0459], [0467], [0531], [0540], [0544], [0557], [0559], [0561], [0563], [0565], [0567], [0569], [0571], and [0575] are also amended to clarify the nomenclature supported by the given structures.

Paragraph [0085] and the amendments on pages 58 and 59 are to correct typographical errors. Paragraph [0086] is amended to correct an error in one of the structures given in the scheme 2. Both structures 2a and 2b designate R<sup>2</sup> as the substituent on the ring, where clearly these can not be the same as one is divalent (i.e. connected via a double bond) while the other is monovalent (i.e., connected via a single bond). Structure 2a is amended to designate the substituent as R<sup>2'</sup>, which is clearly converted to R<sup>2</sup> by the given method. Paragraphs [200], [202], [204], [206], [209], [210], and [533] are amended to replace R<sup>2</sup> with R<sup>2'</sup>, reflecting the correction to scheme 2. Paragraphs [0101] and [0103] are amended to correct clear errors in the structures given in the reaction schemes. In both cases, R<sup>9</sup> is limited to the 4 position of the ring, as would be clear to one skilled in

the art upon reading the specification. With respect to paragraph [101], the described reaction steps a and b provide 6c and there is no step c. The intermediate 6b is removed from the reaction scheme to reflect the reaction as described. Further, the chemistry involved in converting the ketone to an alkylidine is well known to one skilled in the art, and involves the reaction of a phosphonium salt, for example of formula  $R^9P^+Ph_3Br^-$ . This reagent was mistakenly represented as  $R^9CH_2Br + Ph_3P$ , which reacts to provide the phosphonium salt. The  $CH_2$  group was mistakenly included in the formula, and does not agree with the scheme, since if present, it would end up between  $R^9$  and the ring atom (i.e., resulting in  $R^9CH_2$  and not  $R^9$  substituent). Also, see scheme 2 in paragraph [0086], which indicates the same reaction, correctly indicating the phosphonium salt of formula  $R^2PPh_3^+X^-$ . Paragraph [102] is amended to indicate the correct author of the cited reference. Paragraph [0130] is amended to correctly indicate that  $R^9$  is an alkyl, as would be understood from reading the scheme with bromoalkene or bromoalkene used in step (a) (ii). Paragraphs [0237] and [0239] are amended to provide the correct compound reference, as would be clear from reading the appropriate scheme. Paragraph [0339] is amended to change method H to method I, which can be clearly seen by comparing the example to the two methods indicated. Paragraphs [0090], [0202], [0206], [0210], [0249], [0315], [0325], [0353], [0373], [0381], [0396], [0404], [0410], [0480], [0496], [0505], and [0551] are amended to insert TM after Dowex. For paragraphs [0373], [0381], and [0551], Dowex<sup>TM</sup> polymeric sulfonic acid  $H^+$  is substituted for NR-50, to properly indicate the resin used. NR-50, which is a similar polymeric sulfonic acid  $H^+$  resin, was mistakenly put into these examples but was not the actual resin use. Paragraphs [225], [0245], [255], [0311], [0315], [0342], [0345], [0348], [0351], [0357], [0358], [0360], [0362], [0457], [0557], [0563], [0566], and [0567] are amended to clarify the examples. These amendments clarify the specification and would be clearly understood by one skilled in the art, and therefore do not add new matter.

The amendments to claims 1-4 and 8 are supported by the amendments to the specification paragraphs [0006], [0010], [0012], [0022], and [0023] as discussed above. The hydrogen at  $R^9$  is not a substitution and is removed from these claims. Claim 4 is also amended to correct the formula number as discussed above for paragraph [0023]. Claims 9, 10 and 12 are amended to clarify the nomenclature of the compounds, and are supported by amendments to the specification paragraphs [0025] and [0026] as discussed above. Claims 2, 3, 9, and 10 are amended to change "and

pharmaceutically acceptable salts thereof" to "or pharmaceutically acceptable salts thereof" to be consistent with claims 1 and 4. The amendments to claims 12- 16 to include "and prodrugs, tautomers or pharmaceutically acceptable salts thereof" are supported by the parent claim 9. Claim 16 is also amended to correctly depend from claim 9, not claim 10. The amendments to claims 17-19 to include "and tautomers or pharmaceutically acceptable salts thereof" are supported by the parent claim 10. New claim 24 is supported by specification paragraphs [0006] as amended and paragraphs [0016] through [0021]. New claim 25 is supported by Example 17 on page 102, and dependent claims 26-29 are supported, for example, by original claims 20-23. Amendment and cancellation of certain claims is not to be construed as a dedication to the public of any of the subject matter of the claims as previously presented. No new matter has been added.

### **Rejections under 35 U.S.C. §112**

Claims 1-8, and 20-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The Office Action indicates that terms such as "alkyl", "cyanoalkyl", etc., lack enablement in that substituents have not been set forth and said terms have not been limited to any number of carbon atoms. Applicants would like to thank the Examiner for the helpful phone interview relating to this rejection. Applicants respectfully disagree with the rejection. The specification on pages 24-29 gives definition to the terms used in the claims. For example, "alkyl" is defined in paragraph [0040] and is limited to linear saturated hydrocarbons of one to eight carbon atoms or branched saturated hydrocarbons of three to eight carbon atoms. This definition of the term "alkyl" is applied to the other definitions using the term "alkyl", unless indicated otherwise. Thus, "alkoxy" refers to "alkyl-O-", where alkyl is as defined in paragraph [0040]. In addition, substitutions are clearly indicated, for example "substituted oxygen" refers to the group "-O-R<sup>d</sup>", where R<sup>d</sup> is alkyl, haloalkyl, etc. As all the terms in question are clearly defined, with the substituents and number of carbon atoms set forth in the definitions, Applicants believe that the claims are fully enabled. Applicants respectfully request that this rejection be withdrawn.

**Rejection under the doctrine of obviousness-type double patenting:**

Claims 1-23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 of copending Application No. 10/642,807. It is understood that this provisional rejection may be withdrawn if this is the only rejection remaining in the present application, as long as there are rejections in addition to the provisional double patenting rejection in the copending case. As such, Applicants would prefer to deal with any double patenting rejection in the copending case, if necessary.

**CONCLUSIONS**

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no.342312004920. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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Respectfully submitted,

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